that they cannot now use and will effectively be prevented from bidding for new jobs or adding new services because the freeze precludes the modification applications and/or applications for new sites that may be required. Indeed, the local paging operators will face difficulty in retaining their current customer base if they are unable to provide the services that their clients want and have come to expect from a paging company, and, particularly, if their competitors are not similarly handicapped. And, all this is not even to mention the broader impact on the immediate availability to consumers of state-of-the-art services from a variety of competitive sources.

Paradoxically, the decision to halt processing of paging applications especially makes no sense in light of the agency's purported "desire to allow incumbent licensees to continue operating their businesses and meeting public demand for paging services during this rulemaking." NPRM at ¶ 140. The interim licensing allowed during the rulemaking is so limited as to be of no practical use for the real needs of local and regional paging service providers. Thus, the freeze will achieve a result precisely the opposite the stated desires of the Commission, as it will undermine the ability of paging operators to promptly expand their coverage area to meet customer demand and to upgrade to FLEX networks in order to meet consumer needs and desires, including the growing demand for advanced alphanumeric pagers. And the change in the interference contours serves only to minimize what little relief was provided by the Commission through the narrow exception allowing licensees to add sites or modify sites within their contour.

Moreover, in terms of the review of agency action under the APA, it is clear that an agency must have an adequate justification to treat similarly situated parties differently. *Petroleum Communications*, 22 F.3d at 1172. *See also New Orleans Channel 20, Inc. v. FCC*, 830 F.2d 361 (D.C. Cir. 1987); *Public Media Center v. FCC*, 587 F.2d 1322, 1331 (D.C. Cir. 1978).

Here, there is absolutely no justification for freezing the ability of local paging operators -- who are often small and medium size businesses -- to obtain new transmitter sites while allowing the nationwide operators -- who are virtually all large companies -- unrestricted ability to expand. These entities are direct competitors.

In defense of this distinction, the Commission offers that "the addition of such sites by the nationwide licensee will not affect the spectrum available to others." NPRM at ¶ 142. But this extremely narrow view fails to take into account that local and regional carriers will be affected in other, central ways. Thus, nationwide companies -- who already have certain competitive advantages, including ready access to capital -- will be able to take advantage of the down time associated with the freeze to sprint ahead of their competitors by moving forward with plans to upgrade to or install FLEX networks and expand their service areas, all while the local and regional companies are left to sit on the sidelines and watch. These local and nationwide carriers are in all respects identical from a competitive standpoint. They compete for the same customers on a daily basis. There is no fair or rational basis for treating these equal competitors differently.

II. THE COMMISSION'S INTERIM LICENSING POLICY IS CONTRARY TO THE PUBLIC INTEREST.

The Communications Act requires the Commission to advance the "public interest, convenience, and necessity" in its licensing and rulemaking decisions.[31/] Contrary to this statutory mandate, the Commission's interim licensing policy will not serve the public interest and, in fact, is inconsistent with prior determinations by the Commission of where the public interest lies in the context of licensing paging systems.

31/ 47 U.S.C. §§ 303, 307, 309. *See also FCC v. WNCN Listeners Guild*, 101 S. Ct. 1266, 1269 (1981).

A. The Public Interest in Expansion of Existing Paging Systems.

In the *1993 PCP Order* for example, the Commission adopted a policy favoring expansion of existing paging systems over applications to construct a new system in cases of mutual exclusivity on the grounds that the public will benefit from more rapid access to wide-area service. In this regard, the Commission found:

> [A]llowing existing licensees to expand their service area will result in broader coverage for existing users of those systems, whereas authorizing a new competing system would prevent such users from obtaining expanded coverage without subscribing to both services. [Further], by encouraging expansion of existing systems, the restriction will promote rapid access to wide-area service for new users as such systems reach new areas, whereas applicants who have yet to construct any portion of their systems would generally require more time to make wide-area service available.[32/]

This relationship of the expansion of existing paging systems to the public interest is simply a consequence of the fact that the paging industry is well-developed and highly competitive. Because of the large number of providers occupying the available spectrum, not only are new channels not available for new entrants, but new entrants are not needed to assure affordable and innovative service for consumers. Rather the key here is -- as the Commission itself recognized -- to allow existing systems to expand and bring new services to the marketplace, in short, to compete.

Yet it is just this kind of expansion and innovation that the freeze is designed to thwart. Thus the freeze is at odds with the public interest in the paging industry as it has traditionally and correctly been understood by the Commission.

32/ Amendment of the Commissions Rules to Provide Channel Exclusivity to Qualified Private Paging Systems at 929-930 MHz, *Report and Order*, 8 FCC Rcd 8318, 8330 at ¶ 33 (1993) (hereinafter "1993 PCP Order").

B. The Public Interest in Conserving Scarce Administrative Resources.

In imposing the freeze, the Commission also further placed itself at odds with the public interest in conserving scarce administrative resources. If the freeze remains in place, the wholly anticipated and necessary result will be the filing of large numbers of waiver requests by licensees seeking relief from the order. These waiver requests will each present unique facts and circumstances which the agency will need to review in deciding whether to grant each request. The declarations appended to this petition illustrate the diversity of business and technical circumstances in this industry, and the innumerable factual scenarios likely to be raised in waiver requests.

Under well-established precedent, waivers must be granted where the facts warrant and there is good cause to do so.[33/] Consideration of the flood of waiver requests (and requests for clarification) likely to result from the freeze will require the devotion of substantial administrative resources at a point in time when agency resources are strained already by budgetary constraints and increased responsibilities under the Telecommunications Act of 1996.

III. THE COMMISSION'S INTERIM LICENSING POLICY WAS PUT INTO EFFECT WITHOUT COMPLYING WITH THE PROCEDURES REQUIRED BY LAW.

A. Prior Notice and an Opportunity to Comment Was Required Before the Commission Could Reduce the Interference Contours of Existing Licenses.

In the NPRM, as part and parcel of the suspension of the processing of paging applications, the Commission acted unilaterally, and without prior notice, to reduce the relevant interference contour for 900 MHz licensees through a footnote to the interim licensing policy. NPRM at

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33/ *See WAIT Radio v. FCC*, 418 F.2d 1153, 1157 (D.C. Cir. 1969).

¶ 140 n.271. This reduction could curtail the protected operations of incumbent licensees by more than 4,000 square miles.[34] No explanation for imposition of the new interference contour (which was proposed in the NPRM for comment) was provided. This new policy has the direct effect of depriving paging operators of a substantial portion of their protected area of operation, O'Brien Declaration at ¶ 22, and thus substantively modifying their existing licenses. This modification is particularly harmful given that the freeze order allows paging operators to add sites to existing systems or to modify sites only within the area of their interference contour.

The Commission states no reason for adjusting the interference contour, and it is difficult to discern one as the change appears to be at direct odds with the public's interest in having reliable paging services and the paging operators' interest in, at the very least, maintaining their current level and scope of services during the freeze. Indeed, the decision to lessen the interference contour runs directly contrary to the Commission's statement of its "desire to allow incumbent licensees to continue operating their business and meeting public demand for paging services during this rulemaking." NPRM at ¶ 140. Reducing the contour simply increases the likelihood that paging operators will experience gaps in their ability to provide service to their customers and limits even more severely the ability of carriers to upgrade to the new FLEX systems. Nor is the proposed reduction in the interference contour justified by the Commission's goal of moving from a transmitter - based licensing system to a geographic based - licensing system, since the Commission has already proposed a method for accommodating the interests of the incumbent licensees and the new geographic licensees, whatever the interference contour.

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[34] *See* O'Brien Declaration at ¶ 21.

Section 316 of the Communications Act permits the Commission to modify any station license if in its judgment such action will "promote the public interest, convenience, and necessity, or the provisions of [the] Act," but states that no such order of modification shall become final until the holder of the license shall have been notified in writing regarding the "ground and reasons therefore" and be given "reasonable opportunity, of at least thirty days," to protest the proposed modification. 47 U.S.C § 316. In any case, and whatever the reason for the change, the lack of notice and opportunity for comment as required by Section 316 makes immediate implementation of the new standard for the contour invalid.

B. The Unique Circumstances Of This Freeze On New Applications For Paging Services Distinguish It From Other Simply Procedural Freezes And Render The Promulgation Of The Freeze Unlawful In The Absence Of Notice And Comment Rulemaking.

1. The Freeze Affects Substantive Rights of Incumbent Licensees.

In adopting an interim licensing policy, without prior notice and comment, the Commission violated well-established principles of agency conduct. Section 553(b) of the APA prohibits the implementation of agency action affecting the rights of private parties unless it is preceded by a notice of the proposed action, publication of the proposed action in the federal register, the opportunity for comment on the proposal, and a written statement by the agency explaining the basis and purpose of the action. The Commission acknowledges, as it must, that these requirements have not been met with respect to the freeze since the freeze was summarily ordered without prior

notice, but contends that the "changes in application processing is procedural in nature," and thus not subject to these requirements of the APA. NPRM at ¶ 157.

While the imposition of a freeze in some contexts may be simply procedural, *see, e.g.*, *Kessler v. FCC*, 326 F.2d 673 (D.C. Cir. 1963), this is not the case here where the freeze and accompanying change in the interference contour substantively impact -- and redefine -- the service area of the incumbent licensees and the operation of the current licensing rules. *Cf. Reeder v. FCC*, 865 F.2d 1298 (D.C. Cir 1989) (per curiam) (agency required to provide notice and comment rulemaking before promulgating a rule purporting merely to define procedures for submitting counterproposals regarding an upgrading of existing FM stations where the procedures in fact foreclosed agency consideration of counterproposals which previously would have been accepted for processing).

A rule is "procedural" only where "it covers agency actions that do not themselves alter the rights or interests of parties." *Batterton v. Marshall*, 648 F.2d 694, 707 (D.C. Cir. 1980). *See also National Ass'n of Home Health Agencies v. Schweiker*, 690 F.2d 932, 949 (D.C. Cir. 1982), *cert. denied*, 459 U.S. 1205 (1983) (APA exemption from the notice and comment requirement does not apply to agency action which has a substantial impact on substantive rights and interests); *Reynolds Metal Co. v. Rumfeld*, 564 F.2d 663, 669 (4th Cir. 1977) (rule is substantive when it has substantive impact on the rights or duties of a regulated individual); *Pickus v. United States Bd. of Parole*, 507 F.2d 1107, 1113 (D.C. Cir. 1974) (practice or procedure "should not be deemed to include any action which goes beyond formality and substantially affects the rights of those over whom the agency exercises authority."). Here, the rights of the incumbent licensees are substantively affected by the inability to file applications necessary for the daily

conduct of their businesses as well as by the Commission's unilateral and unexplained redefinition of the licensees' protected service areas.

2. No Good Cause Exists for Not Complying With the Notice and Comment Requirement.

The Commission contends that even if the freeze is considered substantive, the "good cause" exception to the notice and comment requirements set forth in section 553(b)(B) of the APA applies. NPRM at ¶ 157 The Commission contends that notice and comment is "unnecessary" in this case because, in essence, the exceptions to the freeze render the suspension of processing of pager applications "non-controversial and unlikely to provoke public comment" and because the freeze provides "limited relief to incumbent licensees without interfering with other licensees' operation or affecting the spectrum availability to future applicants." *Id.* But, the "good cause" exception is a narrow one. *National Nutritional Foods Ass'n v. Kennedy*, 572 F.2d 377, 384 (2d Cir. 1978). And while one of the statutory bases for good cause under section 553(b)(B) is that notice and comment is "unnecessary," this term means "unnecessary so far as the public is concerned, as would be the case if a minor or merely technical amendment in which the public is not particularly interested were involved." *Xin-Chang Zhang v. Slattery*, 55 F.3d 732, 747 (2d Cir. 1995) (quoting *National Nutritional Foods*, 572 F.2d at 385 (citation omitted)).

Clearly this is not a minor or merely technical change in the present rules. Moreover, the Commission itself has implicitly acknowledged the likely public interest in the rule and the potential benefit that could be derived from notice and comment rulemaking by soliciting comments to the freeze on an expedited basis.[35/] NPRM ¶ 153. Indeed, the extent of public interest so far has

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35/ Indeed, this is precisely the type of substantive policy decision which should be the subject of public notice and comment because of the significant harm resulting to a broad range of persons and entities, including paging operators, their customers and equipment manufacturers. The Commission appears to have acted under the mistaken impression that the freeze would not significantly affect incumbent licensees. NPRM

been vast. The decision whether to issue a freeze was, accordingly, improperly withdrawn from public deliberation.

CONCLUSION

For the foregoing reasons, the Coalition respectfully requests that the Commission immediately withdraw the freeze, pending expedited consideration of the need for a freeze, and move forward expeditiously with (1) processing of all pending paging applications; (2) acceptance and processing of subsequent applications for new or modified facilities by incumbent permittees and licensees (regardless of the interference contour); and (3) processing of all pending and subsequently-filed requests for exclusivity.

Respectfully Submitted,

COALITION FOR A COMPETITIVE
PAGING INDUSTRY

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February 28, 1996

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at ¶ 157. As a result, the Commission clearly would have benefited from conducting notice and comment proceedings.

Exhibit 1

Re: FCC Docket 96-52
February 26, 1996

DECLARATION OF KEVIN F. O'BRIEN

I, Kevin F. O'Brien, declare under penalty of perjury that the following is true and correct to the best of my knowledge.

1. I am president of O'Brien Communications Inc., a Virginia corporation specializing in the design and analysis of radio communication systems. A detailed statement of my qualifications to prepare this Declaration is attached hereto as Attachment A.

2. I have prepared this Declaration on behalf of the Coalition for a Competitive Paging Industry ("Coalition"). In addition, by letter dated February 20, 1996, I have written to the Chairman concerning the freeze imposed on new and pending paging applications. A copy of that letter is attached hereto as Attachment B.

3. I have reviewed the Commission's Notice of Proposed Rule Making in WT Docket No. 96-18 ("NPRM"), and in particular have analyzed those portions of the NPRM related to the Interim Licensing Proposal.

4. It is my opinion that several of the assumptions upon which the Commission relied in imposing the freeze were based upon inaccurate information and failed to consider certain aspects of both the paging industry and current paging system technology. In particular, and as set forth in detail below, the Commission failed to fully consider the spectral efficiency of paging; the dearth of frequencies available in the top 120 markets; the industry's current, rapid migration to the advanced, high speed FLEX paging protocol; the impact on the offering of desirable alphanumeric paging to the public; and the severe reduction in 900 MHz licensees service areas due to the changes implemented in the calculation of existing interference contours; and, the anti-competitive impact of exempting 900 MHz nationwide carriers from the freeze.

5. The Coalition does not condemn market based licensing or auctions - those actions may or may not be a reasonable way to efficiently allocate the paging spectrum. However, to freeze the growth and expansion of existing carriers in a mature industry because of a desire to preserve limited white space which is unlikely to support new entrants is not consistent with the Commission's stated goal in this proceeding.

Spectral Efficiency of Paging

6. The Commission, in numerous dockets and allocations over the years has always emphasized the need for spectral efficiency in the various services. Since usable radio spectrum is a finite resource, the Commission has promoted the spectral efficiency many times, including, for instance, awarding pioneer preferences to carriers presenting new and efficient technologies; the recent re-channelization to narrowband operation for operators under Part 90; and the conversion in the cellular bands to digital technology.

7. Interestingly, it has never been necessary for the Commission to institute such a proceeding in the paging bands. This is because the spectral efficiency in paging was, and continues to be, driven by marketplace forces. As set forth in the NPRM at paragraph 3, when all paging spectrum is considered (including those lightly used low power and lowband portions), the Commission has allocated the following spectrum to paging. All allocated paging channels have a nominal occupied bandwidth of 20 KHz.

Part 22 Allocation	
35 MHz Band (16 Channels)	320 KHz
43 MHz Band (16 Channels)	320 KHz
152 MHz Band (22 Channels)	440 KHz
454 MHz Band (26 Channels)	520 KHz
931 MHz Band (40 Channels)	800 KHz
Total Part 22 Allocation	**2400 KHz = 2.4 MHz**
Part 90 Allocation	
152 MHz Band (4 Channels)	80 KHz
462 MHz Band (8 Channels)	160 KHz
465 MHz Band (1 Channel)	20 KHz
929 MHz Band (40 Channels)	800 MHz
Total Part 90 Allocation	**1060 KHz = 1.06 MHz**
Total Spectrum Allocated to Paging	**3.46 MHz**

8. The January 22, 1996 edition of Radio Communications Reports estimate that there are 34.1 million paging subscribers in the United States. This is a per population penetration rate of approximately 13%. Even conservatively assuming that the Part 22 lowband

channels are actually in use, the arithmetic yields the impressive figure (34.1/3.46) of 9.86 million subscribers per megahertz of spectrum. No other service ever allocated by the Commission is anywhere near as efficient as paging, and this efficiency was not driven by regulation, but rather by the highly competitive and marketplace driven nature of the industry itself. The paging industry has never required the Commission to intervene in its operational characteristics, as it has in other industries, since the spectral efficiency demanded by the Commission has been achieved through marketplace forces.

Available Frequencies in the Top 120 Markets

9. With the exception of some lowband Part 22 channels, there are virtually no wide-area channels available for assignment in the most of the top 120 markets. Thus, a review of the FCC database reveals that in the top twenty markets in this country, there is not a single paging channel available for assignment excluding a limited number of undesirable 35/43 Mhz low band channels. The situation in the top twenty market is mirrored in numerous smaller markets as well. Where there are channels available, they are simply not wanted by anyone.

10. And where white space is available, it is not particularly desirable. For example, consider a market like Wichita, KS. Wichita has an area population of approximately 310,000. Assuming the continued substantial growth in the paging business, a penetration rate of 25% can be expected by the turn of the century. Therefore, it can be liberally assumed that 77,500 pagers will be in service at that time With a single paging channel operating under the FLEX protocol being able to service more than 500,000 digital units, it is unlikely that all 173 available channels will ever be constructed in Wichita. Auction or no auction, freeze or no freeze, there will likely always be "white space" in Wichita.

11. With respect to the major markets, it is worthwhile to analyze why there are no channels available. For example, an analysis of the Atlanta market indicates that there are no frequencies available. However, in just the 929 MHz band, PageNet is currently authorized for 9 channels in the Atlanta market, five of which are nationwide authorizations (929.2875, 929.5625, 929.6125, 929.7375, 929.8625). All five of those channels have been exempted from the freeze.

12. A consideration of the past 15 years of growth in the paging industry are indicative of what can be expected in most medium to small markets. Existing carriers will continually upgrade and expand there paging infrastructure to meet new demand. New entrants will occasionally seize upon what they believe is an available niche in the market and will

construct new infrastructure. Some existing carriers will be displaced by the aggressive new entrants, and many new entrants will see their investment disappear. But in nearly every case, a highly competitive marketplace will determine the survivors. This evolution has resulted in an industry virtually devoid of any desirable "white space". Indeed, in any given market in the United States there are anywhere between 5 and 25 different licensed carriers, and often dozens of agents and resellers, all competing for the same customers.

The Emergence of the FLEX Protocol in the Paging Industry

13. As set forth above, the paging industry has always - out of necessity - been self regulating with respect to spectral efficiency. In the early stages of its growth, paging technology evolved through such spectrally inefficient schemes as two-tone, five-tone, voice and GOLAY protocols. Once POCSAG was adopted as an industry standard (again without Commission intervention), those older, less efficient protocols were all but abandoned. Though there is still some voice, and even some GOLAY, in the smallest markets, its oppressive air-time requirements have all but eliminated analog voice and GOLAY signaling from the paging industry.

14. POCSAG paging itself developed rapidly as the industry grew. Initially, all POCSAG units operated at 512 baud. Then, as air-time began to fill, 1200 baud POCSAG was introduced. Those carriers who switched to the higher baud rates in order to increase available air-time found that the increase in signaling speed led to a reduction in the effective reliable service area of their existing sites. Typical required received signal level at 1200 baud was found to be approximately 3 db higher than at 512 baud. Accordingly, a significant increase was seen in the number of transmitter sites necessary to adequately serve a given area. Those additional transmitters were not added at simply what the Commission would consider "fill-in" or "internal" sites, but rather, many additional sites were required at what would be deemed perimeter locations - locations outside of a licensees currently authorized service or interference contours. Those sites were not added to necessarily "increase" service area, but to "maintain" service area.

15. A similar efficiency increase began approximately 3 years ago, when 2400 baud POCSAG became a reality - and the infrastructure upgrade process was repeated. Even though the process was (and is) cumbersome, the carriers who were converting to 2400 baud signaling filed their license applications on a site by site basis and continued to increase the spectral efficiency of their channels. In some cases, the increased capacity allowed carriers access to

attractive, adjacent markets by this expansion. However, in most cases, those additional perimeter sites (which appear by only referencing the Commission's database - to "expand" the carrier's service area) are merely sites required to again "maintain" an existing reliable service area.

16. Now the industry, in the single most spectrally efficient leap in its history, has embraced Motorola's FLEX protocol. While the 6400 baud capability of the FLEX protocol is impressive on its face, this technology uses a completely different encoding scheme which includes significant error correction and "wake-up" battery save features. The near universal acceptance of the FLEX protocol by the industry during 1994-1995 has led to many changes. On the infrastructure side, there has been a significant increase in the use of satellite control delivery systems (as opposed to the 1980s-early 1990s predominant terrestrial control) and the rapid upgrade of base station equipment capable of handling high-speed, synchronous data streams. As to subscriber equipment, completely new lines of subscriber products are being offered by the manufacturers - many of them usable only on FLEX systems. This has translated into vast expenditures for new equipment by the paging operators.

Alphanumeric and Data Offerings

17. The paging industry has always been interested in alphanumeric messaging. For some frequency rich carriers, penetration rates for alpha services had approached 30% of units in service. However, as the industry-wide penetration rate hit approximately 12%, many carriers made the decision to stop offering alpha service due to its excessive air-time requirement as compared to digital display units. The carriers simply didn't have the capacity to offer alpha service, which is very desirable to the public, because the carriers did not have the capacity available to offer that service given the disproportionate share of channel air time it requires.

18. The advent of high speed FLEX has markedly changed that picture. Carriers upgrading to FLEX will have the capability to serve well over 100,000 alphanumeric units on a single channel, leading many carriers to completely revise their marketing plans to focus on the sale of alpha. A recent analysis in the December 1995 *Wireless Week* suggests that alphanumeric units could account for 25% of all units in service by the year 2000. This widespread adoption of alpha offerings by the carriers will result in significantly increased competition in the marketplace and a corresponding reduction in prices to the consumer. At this point, virtually every medium to large carrier in the country is either in the process of upgrading older equipment

to FLEX capability, building out new FLEX Systems, or moving forward with immediate plans to do so.

19. Much of this growth will be due to the advanced message delivery techniques which have been developed by the industry. In the past, alpha message delivery was typically accomplished by an alpha dispatch service or answering service. That human intervention in the data stream kept service costs high and usage limited. Now, however, the industry has developed techniques which allow messaging via internet gateways - just like sending an e-mail - and via dedicated computer programs which dial up to a carrier's paging terminal automatically. Further, data messaging in the form of news feeds, stock reports, sport scores and a host of other offerings, allow the rapid and dependable delivery of information to subscribers on a regular basis.

20. The freeze has put all of these plans on hold for the local and regional carriers. High speed alphanumeric paging is even more susceptible to transmission error than digital display paging. Therefore, carriers wishing to offer extensive alpha service to the public will need to install even more new base station infrastructure than a display-based carrier. And, as noted, the freeze interferes within their ability to do so. It is estimated that it costs between 100 and 150 dollars to acquire a paging customer. If the service is unacceptable (missed pages, garbled messages, etc.) that customer will be quickly lost and new customers unlikely. It is therefore imperative that the carriers have the necessary infrastructure in place before offering service to the public. The freeze has stopped this desirable and revolutionary progression in the industry.

Changes in the Calculation of 900 MHz Interference Contours

21. At paragraph 140 of the NPRM (and footnote 271), the Commission has redefined the interference contours of existing 929 and 931 MHz licensees. For example, under both services the minimum mileage separation between co-channel facilities operating at 500 watts ERP and 152 meters AAT (500 feet) is set forth in the rules to be 112 kilometers (70 miles). This is based upon a defined service contour of 32.2 KM (20 miles) and a defined interference contour of 80.5 KM (50 miles). Under the 21 dBμV/m calculation required at paragraph 140, the interference contour of the same station is now 55 KM - a reduction in the carrier's protected area of 10,855 square kilometers (4182 square miles).

22. The substantial change in the Rules adopted at paragraph 140 greatly reduces the aggregate protected areas of existing carriers and in the case of regional carriers, results in decreases in protected area on the order of magnitude of hundreds of thousands of square miles. The immediate adoption of the new interference contour thus results in the immediate modification of thousands of licenses, and prevents carriers in some instances from upgrading or maintaining FLEX Systems for their current Service areas.

Inequitable Treatment of 900 MHz Local and Regional Licensees

23. The Commission has exempted the nationwide 900 MHz carriers with exclusivity from the freeze. NPRM ¶ 142. This exemption serves to upset the competitive balance in the paging marketplace and places the local and regional carriers at an immediate and lasting disadvantage. The Commission's reasoning in adopting this exemption is flawed in several respects.

24. First, the Commission seems to believe that the nationwide carriers offer only nationwide service. To the contrary, most of the spectrum allocated to nationwide use is utilized to provide local and regional service to subscribers. Only a relative small proportion of all paging customers subscribe to "nationwide" service. Most customers elect to have local or regional coverage. The nationwide carriers are directly competing with local and regional carriers for those customers.

25. Second, in searching for "white space", the Commission has adopted a strict interference contour standard for regional licensees (who may have a regional license for ten states) while exempting the nationwide licensees. The only difference between a ten state regional licensee and a nationwide licensee is the size of the region (10 versus 52). Any cursory analysis of licensed sites on the nationwide channels compared to those of the regional and local carriers clearly shows that the nationwide frequencies yield much more "white space".

26. Third, and perhaps most importantly, the Commission has not considered the marketing trends in paging which makes the exemption of the nationwide carriers particularly harmful to the local and regional carriers. In recent years, carriers have widely marketed pagers on a pre-paid basis. Typically, a carrier will offer monthly service at a greatly reduced air-time rate to a customer who will pay for one year's service in advance. This is attractive to the carriers in relieving them from the costs associated with monthly billing and collections, and more importantly, establish a client base that is unlikely to change carriers without reason.

Under their freeze exemption, the nationwide carriers will rapidly continue to upgrade and expand their networks while the local and regional carriers are frozen. When a carrier can advertise a more technologically advanced network and the largest service area and the newest FLEX paging units - with no competition - a lot of one year service contracts are going to be signed. The local and regional carriers will have lost the opportunity to sell to those customers for at least a year, and possibly for much longer since the turnover rate among yearly subscribers is typically much lower than monthly subscribers because customers don't want to change their pager telephone number each year. In an industry with such narrow profit margins, the loss of even a few customers hurts, but this huge anticipated loss would have a staggering effect.

Harm to Carriers Effected By the Freeze

27. In providing services to a range of CPC & PCP clients in different service areas, on different frequencies and of different sizes, I have found that all of these carriers are significantly effected by the freeze in one way or the other. This is an extremely competitive industry undergoing a technology revolution. Paging operators are in the midst of responding to the new technology, and customer demands for new services, and the Freeze halts all this.

February 26, 1996

Kevin F. O'Brien, President
O'Brien Communications Inc.
5051 Rapidan Place
Annandale, VA 22003

Re: FCC Docket 96-52
February 26, 1996

DECLARATION OF KEVIN F. O'BRIEN

ATTACHMENT A

Attachment A

QUALIFICATIONS OF KEVIN F. O'BRIEN

Kevin F. O'Brien is the president and founder of O'Brien Communications Inc., a Virginia corporation specializing in the design and analysis of radio communication systems. He is a 1979 graduate in Electrical Engineering from Villanova University in Villanova, PA.

After graduating from Villanova University, Mr. O'Brien was employed by O'Brien & Marks, an Arlington, Virginia law firm specializing in intellectual property matters. He was registered as an agent to practice before the Patent and Trademark Office in June 1979. His responsibilities included the preparation and filing of patent applications, and conducting patentability, infringement and validity studies.

Prior to forming O'Brien Communications, and after leaving O'Brien & Marks, Mr. O'Brien was employed by two law firms specializing in communications law and regulatory representation before the Federal Communications Commission. During that period, from 1982 to 1987, he was involved in the design and licensing of numerous types of radio communication systems including paging systems, trunked radio networks, microwave networks, radio broadcast systems and cellular systems. The cellular system designs were performed for a number of independent telephone companies and radio common carriers. In addition to his system design duties, he was active in preparing and filing technical comments in FCC Rule Making proceedings.

O'Brien Communications is involved in a number of different types of communications system consulting, both domestic and international. In addition to representing clients before the FCC in licensing proceedings, the firm has been actively involved in numerous Rule Making proceedings before that agency.

An abbreviated list of present and former clients includes the Commonwealth of Puerto Rico, the Cellular Telecommunications Industry Association, the Puerto Rico Communications Authority, NEC America, GTE, Glenayre Electronics, GTE International, Celpage, Advanced Communications of the U.S. Virgin Islands, Advanced Communications of Barbados, Metropolitan Houston Paging Services, Always Answering Service, Signet Paging of Charlotte, Dial-A-Beeper, Trinity International, Electrocom Wireless, Best Page, Inc. and a number of other smaller companies.

Some significant projects and their locations for O'Brien Communications and Mr. O'Brien since 1987 include:

1) U.S. District Court for the Central District of California (See DNIC Brokerage v. Morrison & Dempsey Communications, 14 U.S.P.Q. 2nd 1043) - Mr. O'Brien was qualified as an expert by Judge Letts and gave expert testimony on fixed cellular radio telephone equipment and associated interfaces.

2) Budapest, Hungary - Mr. O'Brien was Senior Mobile Radio System Engineer in designing a nationwide radio communication system for MVMT, the National Electric Power

Trust. System included more than 100 transmitter sites and an aggregate of 750 RF channels, operating under the European Standard MPT-1327.

3) San Juan, Puerto Rico - Mr. O'Brien was senior consultant for the Commonwealth of Puerto Rico in developing an island-wide emergency trunked radio communication system for use by public safety agencies. The 10 site, 60 channel system was constructed as designed by Mr. O'Brien and now serves, among others, the Puerto Rico Fire Department, the Civil Defense and numerous other public safety agencies on the island.

4) U.S. District Court for the Central District of California (See Alliance Research Corp. v. Telular Corp. Case No. CV-94 1065 RG (CTx) and Serrano et al v. Telular Corp., Case No. 94-1272 JSL (RGx) - Mr. O'Brien expert testimony on fixed cellular radio telephone equipment and associated interfaces.

5) Budapest, Hungary - Mr. O'Brien was Senior Mobile Systems Engineer in analyzing the need for a nationwide radio communication system for MOL Rt., the National Oil and Natural Gas Company. System analysis included study of feasibility of development of a nationwide trunked radio system for both internal and commercial use.

Since 1987, Mr. O'Brien has also been actively involved in the development of wide-area paging systems throughout the United States and its holdings, including: Puerto Rico; U.S. Virgin Islands; North and South Carolina; Maryland, DC, Virginia and West Virginia; Texas, Louisiana, Greater New York City and New Jersey; Richmond, VA; Georgia; Mississippi; Orlando, FL; Michigan; Minnesota; Arkansas; Illinois and, Pennsylvania. All of those paging systems, operating on a variety of frequency bands at various speeds and under differing control protocols, are presently operating and providing service to the public.

In addition to his consulting work, Mr. O'Brien has been a featured speaker at several industry trade shows. In particular, he was an invited speaker at the Cellular Telecommunication Industry Association annual meeting where he spoke on destruction of the landline telephone network due to natural disasters (in particular, Hurricane Hugo) and the need for cellular bypass and fixed cellular communication units during natural disasters. He also was an invited speaker at several annual meetings of the National Association of Business and Education Radio where he spoke about paging system design and alternative sharing means for private carrier paging channels. He was also the author of an article in Mobile Radio Technology related to shared PCP channels.

Mr. O'Brien's professional associations include: the National Society of Professional Engineers (NSPE), the Virginia Society of Professional Engineers (VSPE); the Institute of Electrical and Electronics Engineers (IEEE); and the Vehicular Technology Society of the IEEE.

Re: FCC Docket 96-52
February 26, 1996

DECLARATION OF KEVIN F. O'BRIEN

ATTACHMENT B

O'Brien Communications Inc.

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Phone: (703) 354-5195
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February 20, 1996

Reed E. Hundt, Chairman
Federal Communications Commission
Washington, DC 20554

Re: Freeze on New Paging Applications

Dear Chairman Hundt:

I am a communications engineer involved for the past 14 years in the design, licensing and construction of paging networks nationwide. I am writing to you on behalf of a number of paging system operators who I assist in these matters to express their deep concern at the Commission's action in imposing a freeze of all paging system licensing and to alert you to the very real business harm that the freeze is imposing on paging operators. This letter also identifies critical technical factors related to the paging industry which appear not to have been considered by your staff and which could prevent achievement of the stated goals of the freeze. While these carriers will each be contacting you individually concerning the specific impacts this freeze is having on their businesses, they also wanted to present this consolidated letter for your immediate and serious consideration.

In the NPRM, paging is called one of the great success stories of American Wireless Communications. However, the freeze you have imposed will jeopardize its continued success and penalize the paging industry for the efficient use of the spectrum it has voluntarily achieved.

1. **Research of the FCC database reveals that in the top twenty markets in the country, there is not a single paging channel - except for a limited number of undesirable 35/43 MHz low-band channels - available for assignment.**

With respect to those low-band channels, they are vacant due to a variety of problems associated with the large wavelength of the signal at those frequencies. Were the Commission to attempt to auction off those frequencies, it is likely that the costs associated with conducting the auction would exceed any revenue received.

The situation in the top twenty markets is mirrored in a large number of smaller markets. For example, there are currently no frequencies available for wide-area assignment to paging in most of the top 120 markets in the country. This illustrates the fundamental nature of the misinformation which you have received from the Bureau and your staff - they for some reason believe that there is significant "white space" left to auction. Based upon that mistaken belief, they have convinced you that a freeze is necessary.

2. The freeze will cause serious economic harm to the paging industry and the public.

The only thing which is being frozen is the ability of existing carriers to respond to marketplace changes, customer demands for improved service and competition in the paging industry. The paging industry is the most mature, stable, competitive and spectrally efficient service which the FCC regulates (total allocation to exclusive frequencies - 3.61 MHz). In any given market in the country there are anywhere between 5 and 25 different licensed carriers, and often dozens of agents and resellers, all competing for the same customers. Those 34.1 million plus customers (a per pop penetration rate of approximately 13% - 9.45 million subscribers per megahertz of spectrum) have seen dramatic increases in the quality and quantity of service offerings, even as the cost for service has dropped dramatically. Clearly, the spectral efficiency of paging on a per subscriber basis compares more than favorably to other services - SMRS, cellular, PCS, etc.

Prices in major markets, particularly those prices available to state governmental agencies on multi-year contracts, have dropped to almost unbelievable levels - often as low as three dollars a month - and the batteries are free. With annual growth in the industry of between 30 and 40 percent, benefits to the consuming public will continue - larger service areas, more service offerings and lower prices - for a long time if not retarded by unnecessary and ill-advised regulatory action.

3. The freeze will prevent implementation of new advanced (and efficient) technologies.

Despite the incredible growth in paging, the paging carriers have not asked the Commission for more spectrum like the SMRS, cellular, industrial and public safety groups, rather - they have embraced advanced technologies to increase the capacity of their channels. A 1980s market driven by 512 baud POCSAG units has evolved - via channel throughput increases to 1200 and then to 2400 baud - to the newest and fastest paging technology ever deployed, the recently introduced 6400 baud capable FLEX

protocol. Virtually every medium to large carrier in the country is either in the process of upgrading older equipment to FLEX capability, or building out new FLEX systems, or has immediate expansion plans to do so. As demonstrated below, the freeze effectively stops this spectrally efficient conversion.

One of the major issues faced by carriers converting from a POCSAG system of various speeds to a FLEX protocol system is the increased signal level required at the paging receivers to operate at 6400 baud FLEX. Simply put, it requires more transmitters to serve a given area under FLEX than it does under POCSAG. For example, if an existing single site 512 baud POCSAG service area is modeled as a circle of 20 mile radius, it may take as many as four transmitters to "cover" that same service area when converting to 6400 baud FLEX. Unfortunately, the Part 22 Rules which define a service area (derived from the Carey curves) have never taken into consideration the system baud rate (and the associated increase in required receive signal level).

The difficulty the carrier upgrading or constructing its FLEX system faces is two-fold: first, with the technology so new, no truly accurate models are yet available for planning purposes; second, and more importantly, it is often necessary for the carrier to expand its service area - AS DEFINED BY THE RULES - simply to maintain its current TRUE service area. The staff will confirm that expansion of the service area typically brings about a concurrent expansion of the interference area the staff is so fond of citing. **The freeze immediately halts many of these system upgrades to more spectrally efficient technologies.**

Of course, the newest entrants into the paging market - those just building out their authorized systems - are even more significantly affected. They often had applied before FLEX was available, and due to the delay in the FCC processing systems, didn't receive licenses until after the FLEX protocol was introduced. Now, the staff wants to restrict those licensees to their originally filed site locations, even though in most instances those carriers MUST build FLEX systems to compete in the marketplace.

The necessity to construct FLEX capable systems is even more profound for those carriers planning to offer alphanumeric service to their customers. Alphanumeric service currently accounts for approximately 12% of all paging service, and has been held close to that level due to high costs to the subscriber. Until recently, carriers have been reluctant to increase alphanumeric paging traffic since such traffic utilizes a disproportionate share of channel air-time. However, the advent of high speed transmission in the FLEX protocol has now allowed carriers to consider offering inexpensive alphanumeric service to their customers. Many carriers have invested in advanced techniques to originate alpha traffic - such as internet gateways for e-mail, dedicated PC to paging terminal software, etc. - which would allow for rapid growth in this segment of the market. In many cases, the last remaining hurdle to the offering of these services was the installation and